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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/792,180	03/03/2004	James T. Russell	02-68	4931

30031 7590 03/22/2005

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EXAMINER

TANINGCO, MARCUS H

ART UNIT PAPER NUMBER

2878

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	<b>Application No.</b> 10/792,180	<b>Applicant(s)</b> RUSSELL, JAMES T.	
	<b>Examiner</b> Marcus H. Taningco	<b>Art Unit</b> 2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) 5 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/3/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### **Claim Rejections - 35 USC § 102**

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wong (US 5,341,214).

Re claim 1, Wong discloses a gas analyzer (Fig. 1) of the recited type comprising: a light source 54; an infrared detector 40 in optical communication with the source 54; and a sample cell 12 between the source 54 and the detector 40 wherein the inside surface 18 of the sample cell 12 is highly reflective (Col. 4, 16-47).

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 6, 7, 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of Eckles (US 6,369,387).

Re claims 2 and 3, Wong teaches that the inside material 18 of the sample cell 12 is coated with a layer of a material tat is highly reflective but fails to specify the type of material.

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Eckles teaches the use of gold to reflect infrared beams (Col. 4, 26-29). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the material **18** taught by Wong to include gold in order to increase reflectance.

Re claim 4, Wong discloses the claimed invention but fails to specify a lens. Eckles discloses a lens **40** disposed so as to receive radiation from the emitter and collimate the light for transmission through the sample cell (Fig. 2). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the lens taught by Eckles in order to efficiently direct the light to the detector to increase sensitivity.

Re claim 6, Wong discloses a gas analyzer (Fig. 1) of the recited type comprising: a light source **54** and an infrared detector **40** in optical communication with the source **54** (Col. 4, 16-47). Wong fails to specify a lens. Eckles discloses a lens **40** disposed so as to receive radiation from the emitter and collimate the light for transmission through the sample cell (Fig. 2). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the lens taught by Eckles in order to efficiently direct the light to the detector to increase sensitivity.

Re claim 7, Wong discloses a sample cell **12** between the source **54** and the detector **40** wherein the inside surface **18** of the sample cell **12** is highly reflective (Col. 4, 16-47).

Re claim 9, Wong discloses a sample cell body **12** with a sample cell chamber defined therein (Fig. 1) and an optical aperture **58** to allow radiation to pass through the sample cell chamber (Col. 4, 35-47).

Re claim 10, Wong discloses a gas analyzer providing: a sample cell body **12** with a sample cell chamber defined therein (Fig. 1), wherein the inside surface **18** of the sample cell **12**

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is highly reflective (Col. 4, 16-47), an optical aperture 58 to allow radiation to pass through the sample cell chamber (Col. 4, 35-47), a light source 54 to emit radiation to be absorbed by a sample gas, and an infrared detector 40 in optical communication with the source 54.

Re claim 11, Wong discloses the claimed invention according to claim 10, but fails to specify a lens. Eckles discloses a lens 40 disposed so as to receive radiation from the emitter and collimate the light for transmission through the sample cell (Fig. 2). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the lens taught by Eckles in order to efficiently direct the light to the detector to increase sensitivity.

Re claim 12, Wong discloses a gas analyzer (Fig. 1) providing: a light source 54 to emit radiation to be absorbed by a sample gas through a sample cell 12, and an infrared detector 40 in optical communication with the source 54 (Col. 4, 16-47). Wong fails to specify a lens. Eckles discloses a lens 40 disposed so as to receive radiation from the emitter and collimate the light for transmission through the sample cell (Fig. 2). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify Wong with the lens taught by Eckles in order to efficiently direct the light to the detector to increase sensitivity.

### **Allowable Subject Matter**

5. Claims 5 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Re claims 5 and 8, prior art teaches a lens used to focus light but fails to teach the use of a half-ball or a ball lens. The prior art of record, taken alone or in combination, does not disclose the claimed limitation, nor does prior art provide proper motivation to modify itself.

## **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kouznetsov (US 6,410,918) discloses a diffusion-type NDIR gas analyzer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus H. Taningco whose telephone number is (571) 272-1848. The examiner can normally be reached on M - F 8:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MT

  
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